Increasing **Testicular** Self Examination in Active Duty Soldiers: An

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Funded by Triservice Nursing Research Grant N01-P11

Research Team

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Purpose of the Presentation

- Overview of testicular cancer and testicular self examination
- Share results from funded study

Testicular Cancer

- Testicular CA (TC) is the most common cancer in men **15-35 years** of age, accounting for **19%** of the cancer deaths in this age group (ACS, 2002).
- **80%** of men in the Army at risk for TC
- ACS (2004) estimates **7200** new cases of TC and **400** men will die from the disease.

Testicular Cancer

- The National Cancer Institute (NCI, 1999) indicates that men can improve their chances of finding a tumor by performing a monthly Testicular Self-Examination (TSE)

- Only **33%** of Active Duty males perform monthly testicular self-examination (Bray et al., 1998)

Testicular Cancer

- **78% increase** from 1988-1996 in testicular cancer among military men (Thompson, 1999).

- Inadequate evidence base to identify most effective way of changing TSE behavior

TC Risks

- Ages 15-35
- White males over other racial groups
- Undecended testicle as infant/child (20 to 40 fold increase)
- Family history, especially siblings

Design

- Quasi-experimental three group pretest/post test design
- Post-test only design

Aims

1. To assess the knowledge of and health beliefs regarding testicular cancer (TC) and testicular self-examination (TSE) in active duty soldiers.

2. To identify the proportion of active duty soldiers who practice monthly TSE.

Aims

3. To assess the impact of the distribution of printed TC/TSE educational materials and shower card on the:

   a. knowledge of and health beliefs regarding TC/TSE.

   b. the monthly performance of TSE in active duty soldiers.

Aims

4. To assess the impact of the presentation of a TC/TSE peer-taught educational video together with shower card on the:

    a. knowledge and health beliefs regarding TC/TSE.

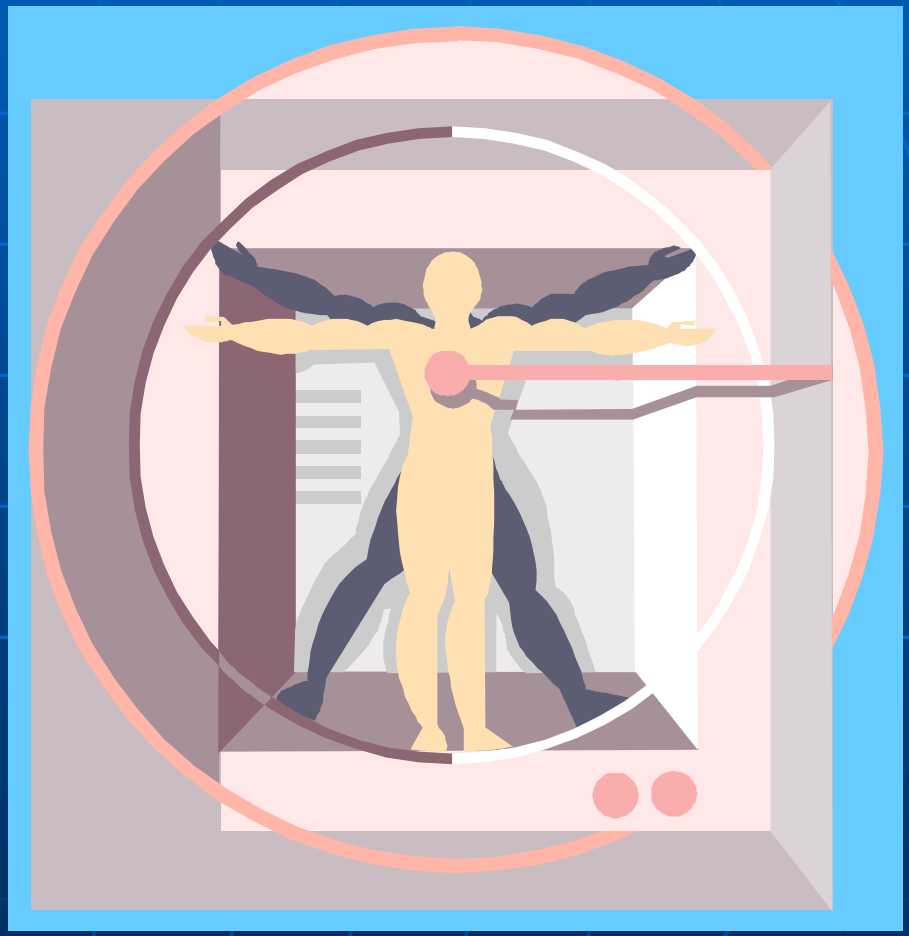
    b. the monthly performance of TSE in active duty soldiers.

Aims

5. To determine which of two educational interventions based on the Health Belief Model is the most effective in increasing the proportion of active duty soldiers who practice monthly TSE.

Sample

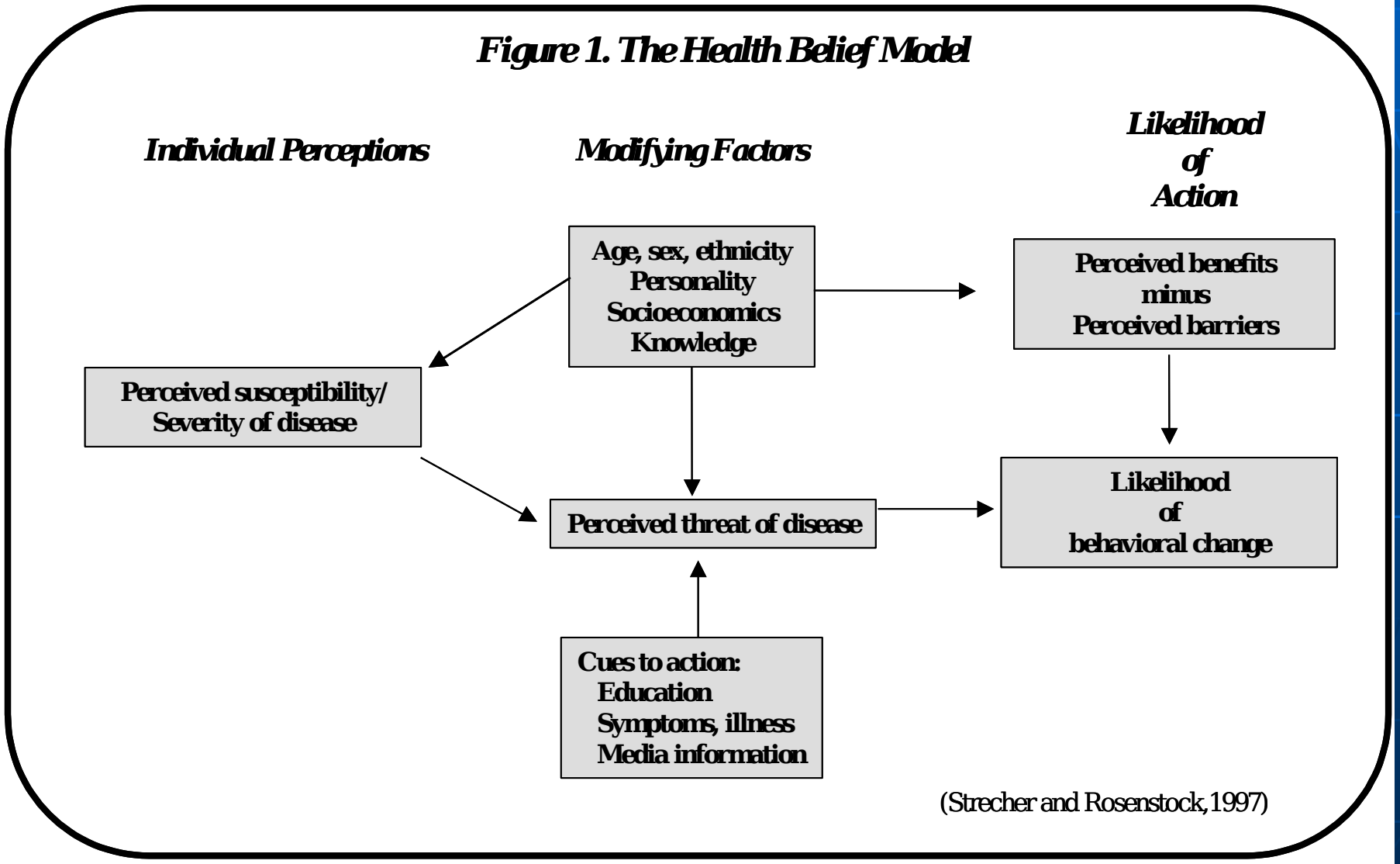
- Active duty soldiers between the ages of 18 and 35
- Three separate companies from a elite unit comprised of 150 soldiers each



Instrument

- Blesch's (1986) Men's Health Care Survey
- Four part instrument
  - Part I-Experience with TC & TSE
  - Part II-Perceived benefits/barriers
  - Part III-Perceived susceptibility/seriousness
  - Part IV-Demographic risk factors/family history

Health Belief Model



Study Use Health Belief Model

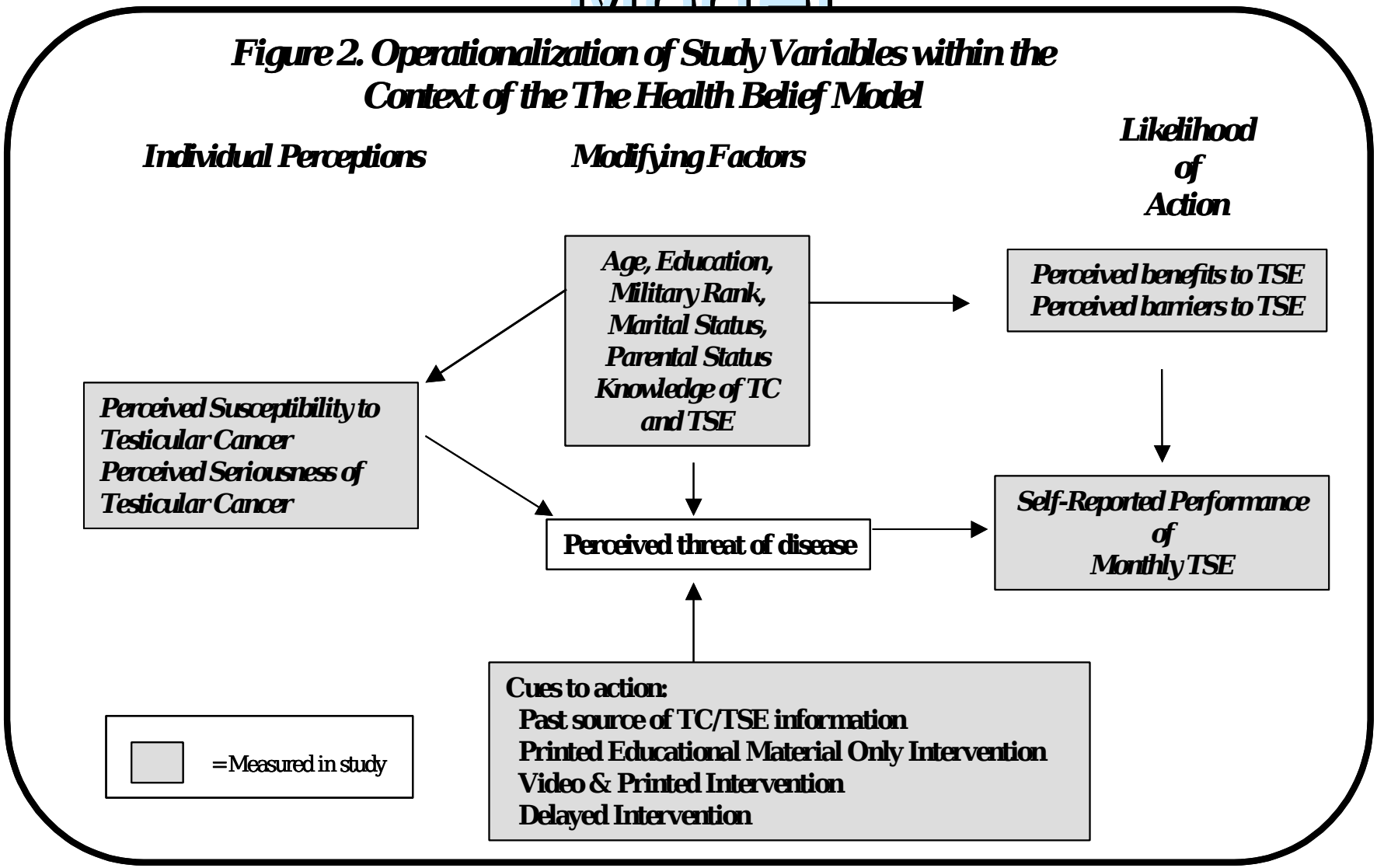


Figure 2. Operationalization of Study Variables within the Context of the The Health Belief Model
Individual Perceptions
Modifying Factors
Likelihood of Action
Age, Education, Military Rank, Marital Status, Parental Status Knowledge of TC and TSE
Perceived benefits to TSE
Perceived barriers to TSE
Perceived Susceptibility to Testicular Cancer
Perceived Seriousness of Testicular Cancer
Perceived threat of disease
Self-Reported Performance of Monthly TSE
Cues to action:
Past source of TC/TSE information
Printed Educational Material Only Intervention
Video & Printed Intervention
Delayed Intervention
=Measured in study

Methods

- 1. Administration of baseline survey (450)

  (Pretest n=61) ☹

- 2. Administer educational interventions

- 3. Distribution of three-month follow-up questionnaires

- 4. Analysis of data and administration of most effective TC/TSE intervention in the delayed intervention group

Intervention Groups

- Group A
- Shower Card & Printed Material

- Group B
- Video & Printed Material

- Group C
- Running Injury Briefing

Findings

Demographics of Sample

- **Race**

Race	n	%
African American	18	19
Asian Pacific	2	2
Hispanic	3	3
White	65	71
Other	4	5

- **Age**

  18-35 (Average age 23.3 years old)

Demographics of Sample

	n	%
Education		
High School Graduate	51	54.8
Some College	31	33.3
College Graduate	5	5.4
Graduate	2	2.2
Trade/Technical School	2	2.2
Rank		
Enlisted	90	96.7
Officer	3	3.3
Family HX of TC	6	6.5

Aim 1:

Assess the knowledge of and health beliefs regarding testicular cancer and testicular self-examination in active duty soldiers??

Aim 2:

Identify the proportion of AD soldiers

Demographics of Sample

	%
Knowledge of TC	89.1
Knowledge of TSE	79.6
Perform TSE Monthly	24.7

- Testicular examination by HCP?

Every Exam	11%
Occasionally	10%
Rarely	28%
Never	51%

} 79%

Aim 3 & 4

To assess the impact of the distribution of printed TC/TSE educational materials and shower card and video on the:

a. knowledge of and health beliefs regarding TC/TSE.

b. the monthly performance of TSE in active duty soldiers.

Top 5 Barriers to Performing TSE

Barriers	%
Men do no practice TSE because they do not know about it	**74.2**
Not sure I could feel lump/swelling	**29.1**
Might cause unnecessary worry	**20.5**
Difficult to remember to do TSE	**14**
Do not think TSE necessary	**6.5**

Top 5 Benefits to Performing TSE

Improved changes of recovery	**93.5**
Would find lump sooner	**88.1**
Good way to detect cancer early	**87.1**
Decrease number of deaths from TC	**84.9**
Confidence About Not Having Cancer	**75.3**

Benefits, Barriers, Susceptibility, & Seriousness

	Group A Printed Material Mean (SD)	Group B Video Mean (SD)	Group C Control Mean (SD)	p
Benefits	35.4 (5.0)	37.4 (4.4)	35.3 (4.5)	0.059
Barriers	21.1 (3.8)	19.1 (5.4)	22.1 (4.7)	0.24
Susceptibility	16.9 (2.0)	17.8 (2.1)	16.9 (2.6)	0.31
Seriousness	14.6 (1.8)	15.2 (2.3)	15.3 (2.1)	0.38

Benefit Tukey's HSD

(I) Company	(J) Company	Mean Difference (I-J)	Std. Error	Sig.
A	B	2.0585	1.37493	.297
	C	-1.0079	1.13261	.648
B	A	-2.0585	1.37493	.297
	C	-3.0664	1.26948	**.047**
C	A	1.0079	1.13261	.648
	B	3.0664	1.26948	**.047**

Knowledge and Practice

	Group A Printed Material n (%)	Group B Video n (%)	Group C Control n (%)	p
Knowledge of TC	25 (96.2%)	19 (90.5%)	38 (86.4%)	0.13
Knowledge of TSE	20 (74.1%)	20 (95.2%)	34 (75.6%)	0.7
Practice TSE Monthly	7 (25.9%)	7 (33.3%)	9 (20%)	0.5

“Never Practice”

Group A Printed Material (%)	Group B Video (%)	Group C Control n (%)	p
40.70%	0%	35.60%	0.004

Aim 5:

Determine which of two educational interventions based on the Health Belief Model is the most effective in increasing the proportion of active duty soldiers who practice monthly TSE.

Did the Video Make a Difference?

- No statistical differences in practice
- More in video group performed TSE (33% vs 26%)
- 95% in video group reported knowledge, as opposed to 75% in other two groups
- No one in video group reported never performing TSE

Did the Video Make a Difference?

- Higher benefits scores in video group
- Higher susceptibility scores in video group
- Lower barrier scores in video group
- Strictly from a research point of few, the answer to Aim is unknown

Limitations

- Small sample size
- Post test only design
- Attrition rate of sample
- Gender/age group

Implications for Nursing

- Most male soldiers on AD at risk.
- Lack of knowledge about TSE was cited as a barrier (74%) in the sample.
- Implied need for more education for AD soldiers about TC/ TSE.
- More education for HCP. 79% of sample report rarely or never being examined.
- Further nursing research using pre-test/post-test method in similar population.

Conclusion

- **Outcomes for one as important as outcome for hundreds!**
- **Thanks to WRAMC Nursing Research Staff and staff from Triservice Nursing Research**